ORIGIN AND DEVELOPMENT OF THE RABAB

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As far as we are hitherto aware the earliest description of a musical instrument termed *rabab* or *rebab* has been given in the *Kitab al-Musiqi al kabir* of Al-Farabi (872 to 950 A.D.).[1] Al-Farabi says of this *rabab* that it is similar to the *tunbur* of Hurasan, a long-necked lute having a small bulging-body, several frets on the finger-board and two strings of the same thickness, which were plucked with a plectrum. Commonly five frets, sometimes more, of the *tunbur* of Hurasan were fixed, the others remained movable. The answer to the question which and how many frets should be moved, is different for each country.[2]

In comparison with the *tunbur* of Hurasan, the *rabab* showed two differences: first, it only seldom had frets, and instead the musician touched the strings at particular points according to his judgement to produce the accustomed scale. For this he placed his fore-finger at that point which was the ninth part between nut and bridge. The middle finger touched the level of one sixth between nut and bridge. At one ninth between the fore-finger and the bridge the fourth finger was placed, at one tenth between this finger and bridge the little finger was set. The result of this placing is the following sequence of intervals (see Figure 1).

The second deviation consisted in the varying thickness of the two strings which were attached to a button underneath the body and wound around pegs in the head of the finger-board. The thicker and lower string of the *rabab* was tuned, in this case, like the second string of the '*ud* (the lute), the thinner and higher string of the *rabab* like the third string of the '*ud*. Moreover it was possible to double one or two strings to amplify the sound. The two strings or pairs of strings could be tuned at an interval of 1½ tone, of a major third, a tritone, a fourth or a fifth. Of these possibilities of

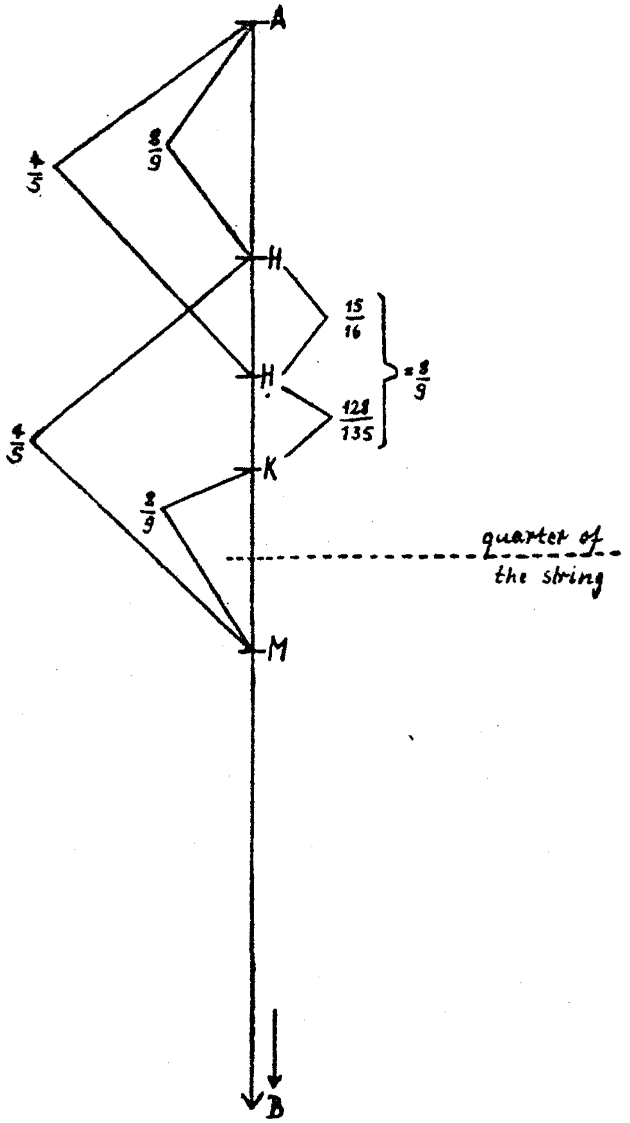


Fig. 1: The pitches obtained by touching a *rabab* string according to Al-Farabi.

tuning, the musicians preferred the first one, i.e. the interval of 1½ tone, but in performances along with an *'ud*, the tuning at fourths or fifths was necessary. However, if the *rabab* accompanied the *tunbur* of Hurasan, the performer tuned the two strings of the *rabab* at an interval of a tone.

In his description Al-Farabi does not give definite information as to whether this instrument was plucked with a plectrum or played with a bow. But in his classification of musical instruments he points out that there are some instruments with strings which are played by drawing other strings — or something similar — across them[3]. Here we can only surmise that this information refers to the *rabab*, but Ibn-Sina confirms this to be correct. Ibn-Sina (980-1037 A.D.) gives in his work about music — included in the *Kitab as-sifa* (book of cure) — likewise a classification of musical instruments. Here he states that there are instruments with strings and frets, but instead of plucking the strings, one draws (a bow) across them, and this is the case with the *rabab*[4].

Regarding both the texts Henry George Farmer has assumed that the Arabic word *rabab* may be derived from a root *rabba* which signifies 'to collect, arrange, assemble together'. Hence the word *rabab* should refer to the function of the bow, inasmuch the bow 'assembles together' the short tones — produced with a plectrum on the lute or with fingers on the harp — into a long tone[5]. Whether this etymological explanation is correct, cannot be decided in this article, but all musical instruments denoted as *rabab* are played with a bow — except the *rabab* used in India and Afghanistan.

Consequently *rabab* is a term capable of denoting bowed instruments in general, because it signifies 'a stringed instrument played by a bow'. In this respect it corresponds to the Persian word *kamanca*, probably derived from *kaman* — 'bow', which denotes in Persia especially the spike fiddle, and which can be used as a general term for bowed instruments as well.

In the 9th and 10th century the playing of stringed instruments with a bow was not restricted to the Arabian and Persian countries. Ibn-Hurradadbih (died about 912 A.D.) mentions that the Byzantines possessed a wooden musical instrument which was similar to the *rabab*. This is confirmed by a *Glossariom latino-arabicum* of the 11th century where the Arabic word *rabab* is defined by *lira dicta*, i.e. 'called *lira*[6]. In the 10th century bowed instruments are portrayed in Byzantine manuscripts, pictures, and reliefs, as for example in a profusely decorated small ebony box of the 10th or early 11th century[7]. Here a child is depicted sitting on an Acanthus leaf and playing a bowed instrument which he has set on his left knee. The instrument has a pear-shaped body supported by a foot, and it has four strings.

This and many other representations originate from a time in which there were endless wars between Europe and the Middle East. These brought about an intense cultural interchange, in spiritual as well as in material areas. The highly developed Arabian arts and sciences became known in the Occident, and many material and cultural commodities — among these musical instruments — reached Europe. Along with these musical instruments, the bow for stringed instruments was introduced into Europe during the 11th century by way of Moorish Spain and Byzantium. Some autochthonous or already adopted musical instruments, hitherto plucked with a plectrum, were likewise played with a bow[8]. For example in a glossed Psalter manuscript of the library of Amiens in France[9], written about the turn of the 9th to 10th century, the Levite Asaph is portrayed with a pear-shaped instrument which he holds on his left knee and plucks with a stick of 30 to 40 cm in length. A similar picture can be found in a Psaltery of Ivrea, Northern Italy[10] of the same time. Here also an instrument— possibly called 'Fidel' — is reproduced; it is plucked with a long plectrum in the form of a stick. Other representations give similar instruments which are not plucked but played with a bow. These and many other instruments which were common in all West European countries around 1100 A.D. usually have a pear-shaped body and rear pegs. The strings are attached to a tailpiece or a button underneath the body[11]. A very similar type of instrument can be found today in the hands of Turkish musicians[12].

European instruments of this type are sometimes likewise called *rabab*. The name *rabab* or *lira* seems to have been used mainly in cases where the body of the instrument was supported by the left leg and the neck held upwards, as can be seen in a figure from the Cappella Palatina erected in 1140 in Palermo, Sicily[13]. This instrument shows two pairs of strings which were attached to a string holder on the sound-board of the body. Besides the instruments having a pear-shaped body, we also find other instruments having a boat-shaped body which tapers gradually towards the peg-disc. The latter is bent back almost at a right angle. Such an instrument is shown in the hands of an angel-musician in the triptych on an Aragonese reliquiary of the late 14th century, it is a typical Moorish *rabab* called *rabe morisco* by Juan Ruiz[14]. It has two pairs of strings. The upper part of the sound box consists of dark wood and has two sound-holes ornamented by rosettes. Of these rosettes, the smaller one is carved in the form of a triangle, the bigger one like a star with six points. The lower part of the sound-board is commonly a piece of parchment. On this part the bridge (*zamila*) is placed to keep the strings apart from the body. The symmetrically bent bow is held with the palm upwards. An instrument like this is depicted in a manuscript of the Cantigas de Santa Maria of the 13th century[15].

A similar instrument is still commonly used today in North African Mediterranean countries. Figure 2 shows a specimen now in Haag's Gemeentemuseum, The Hague, Netherlands.

Here also the wooden belly is similar to a flat boat and is waisted in its lower part. The sound-board is divided into two parts: the lower half is covered with skin, the upper half with a brass plate pierced with three rosettes which become smaller towards the peg-box. Two strings, fastened underneath to the inside of the body, pass over a flat, trapezoid bridge to the peg-box, where they are stretched by two long pegs with wooden grip-handles. The instrument is played with a coarse bow whose stick forms nearly a semicircle. (Only a small part of the bow stick hanging by the right peg can be seen).

The Turkish instrument having the same form (mentioned above) is called *kemence*. As already pointed out, this name can be explained from the fact that the Turkish word *kemence*, like the Persian word *kamanca*, and the Arabic word *kamanga* can be used as a general term for bowed instruments in the same way as the word *rabab*. But compared with the *rabab* from Northern Africa — as well as most of the *rabab* instruments used in Europe — the Turkish *kemence* shows one deviation: the distance between the strings and the board at the upper surface of the neck is very large. Thus while the strings are touched, they are not pressed against the board of the neck. Only the fingernail touches the string at a particular point without moving it out of its natural position.

According to its name, the *rabab* used in India also belongs to this group[16]. This *rabab* may have been introduced into India along with other commodities when Islam reached India. It is reported that the instrument had been played by Tansen, the great musician at Akbar's court (1556-1606). But the present form of the Indian *rabab* deviates in many details from the instrument described above (Fig. 3).

Its body is carved out of a piece of wood, the sound-board is of parchment and the neck continues into the peg-box which is bent back only slightly. Three of its four strings are made of gut, the fourth is of brass. Frequently the first two strings are doubled. In this case the six strings may be tuned as follows: c' f' g'‿g' c''‿c''. Between the melodic strings and the fingerboard, there are 8 to 11 sympathetic strings. They are tuned to the tones of the *raga* which is to be played. The most important difference compared to all other *rabab* instruments is that it is not played with a bow but with a plectrum. Strictly speaking it does not belong any more to that group which is generally called *rabab*, since it is no longer bowed. Compared to Europe of the 11th and 12th century, in India the reverse process took place: in Europe the instruments hitherto plucked were afterwards played with a bow, whereas in India the *rabab* hitherto bowed is now plucked. But the process in India can not be understood as a retrograde movement, since other instruments, for example *sarangi*, *esraj*, or the European violin in South India, are always played with a bow. It is rather an adaptation to the particularities of the Indian musical style, because plucked instruments especially are suitable to the performance of Indian art music, as in the case of the *vina* and *sitar*.

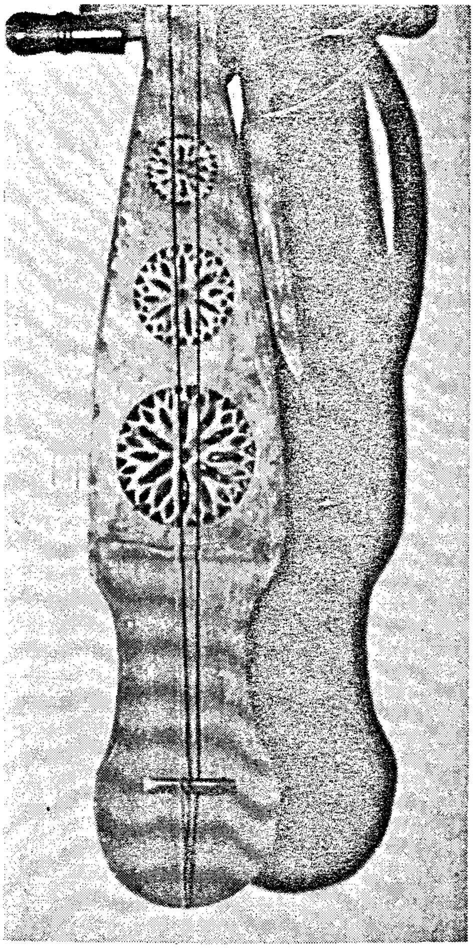
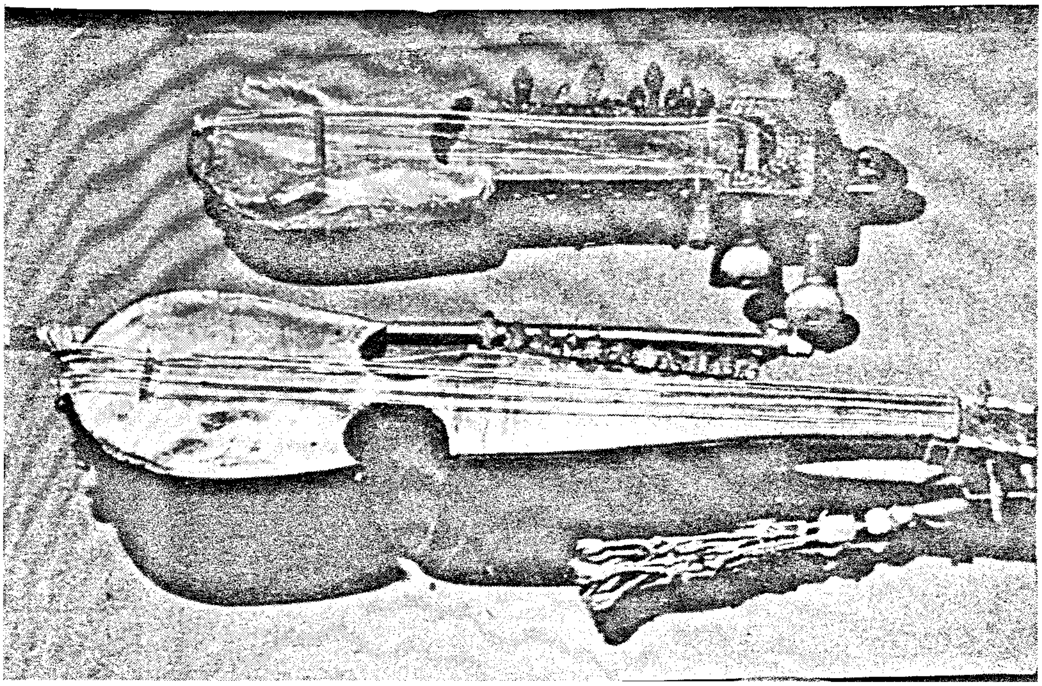


Fig. 2: *Rabab* from Northern Africa, now in Haag's Gemeentemuseum, The Hague, Netherlands.

Fig. 3: Indian *rabab*, now in Haag's Gemeentemuseum.



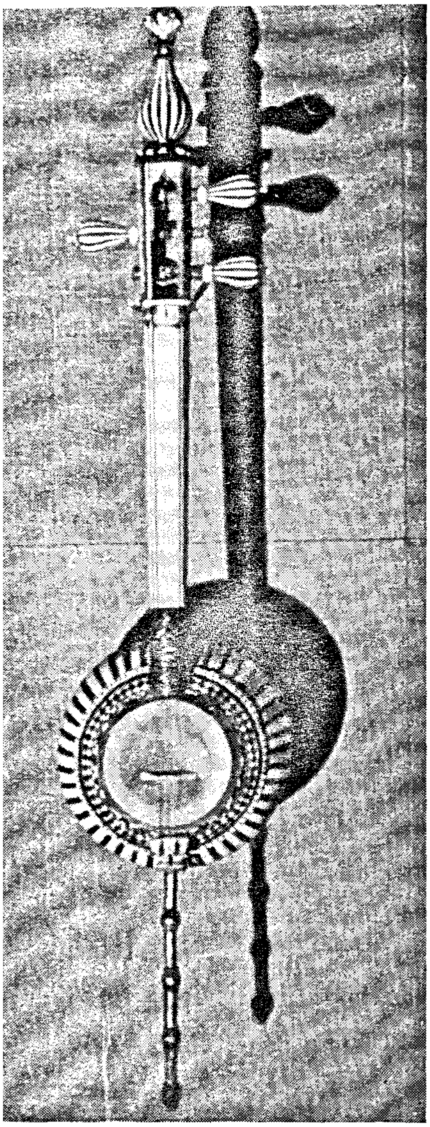


Fig. 4: Persian *kamanca*, now in Haag's Gemeentemuseum.

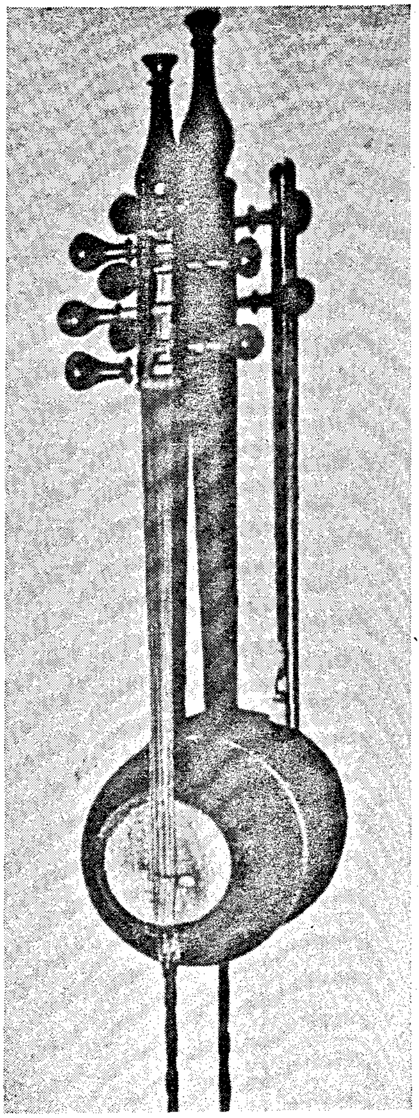


Fig. 5: Persian *kamanca*

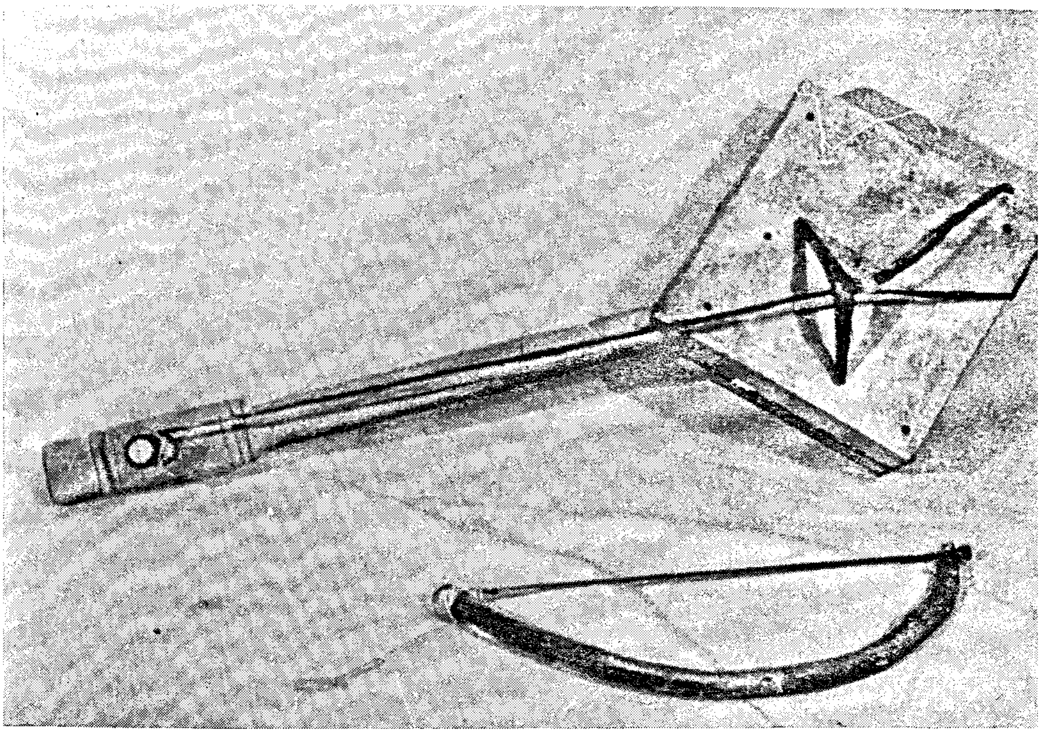
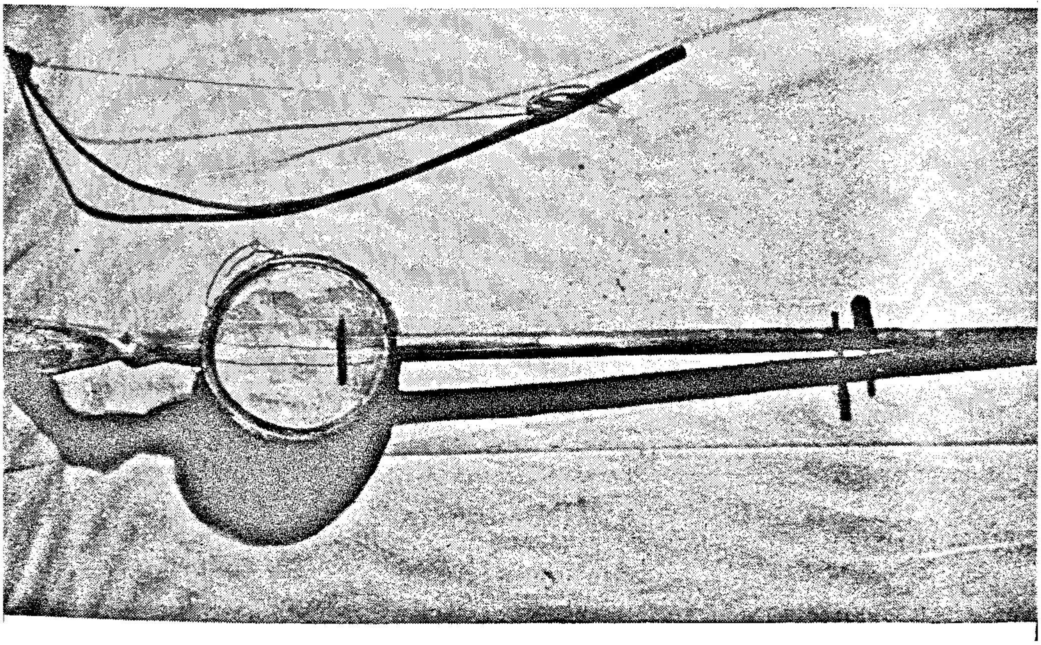
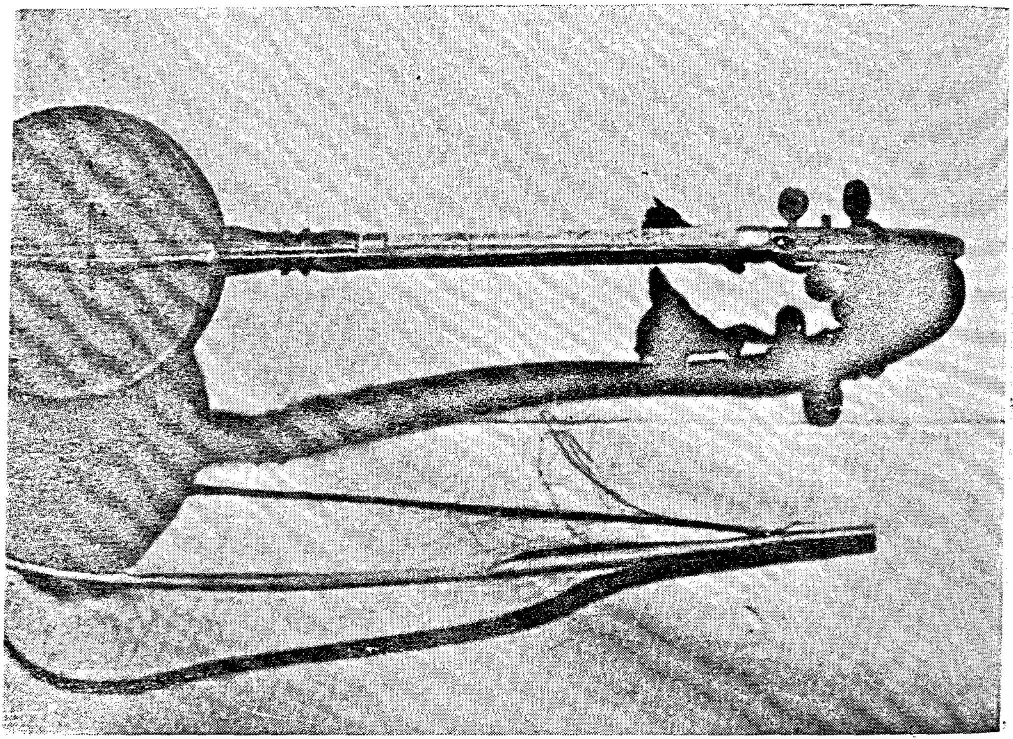


Fig. 6: Egyptian *rabab*, now in the Tropical Museum, Amsterdam, Netherlands.

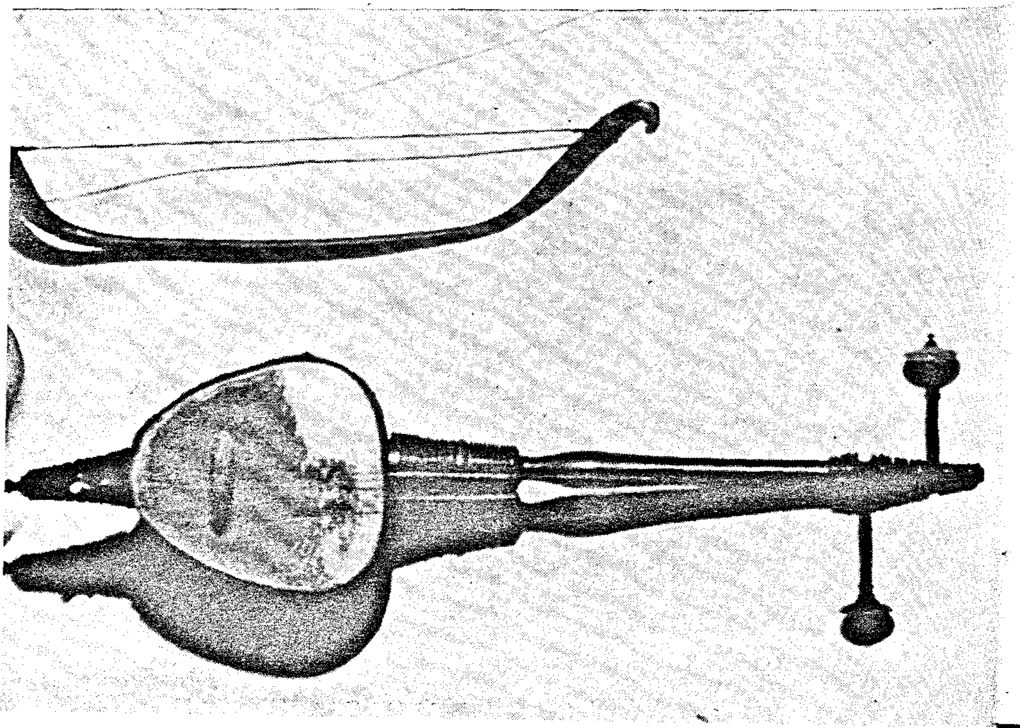
Fig. 7: Spike fiddle of Sumatra, now in the Tropical Museum, Amsterdam.





Rabab from Tidore, now in the Tropical Museum, Amsterdam.

Spike fiddle from Celebes, now in the Tropical Museum, Amsterdam.



Having gleaned some information about the types of *rabab* — the first, a long-necked lute similar to the *tunbur* of Hurasan described by Al-Farabi, and the second, a lute with a bellied, pear-shaped or boar-shaped body, we must now discuss the type of instrument which is the prototype or forerunner of the *rabab* used in the *Gammelan* orchestra and in other ensembles of South East Asia (Fig. 4). This is a spike fiddle, called in Persia *kamanca* (in a narrower sense), in the Arabian countries *kamanga*, in Turkey *rebap*. (Here it is interesting to see how the two names can be changed.)

Figure 4 shows a priceless Persian instrument with a spherical body constructed of strips of dark wood and ebony alternately. The circle around the head of the body consists of wood and mother-of-pearl. The opening of the top of the body is covered with parchment, and here the wooden trapezoid bridge is placed. Three strings are attached to hooks on a small piece of brass underneath the body, which is at the same time the upper end of the spike. This is where the stick of the instrument starts. It passes through the body and continues into the neck, with which it is joined by a metallic cylinder, perhaps of brass. The pegbox and a piece shaped like a double onion are at the far end of the neck, which tapers slightly towards the body.

Other instruments of this type are not as profusely ornamented as this particular one, but their structure is always the same, except for some small deviations. For example, they may have five strings instead of three (Fig. 5).

To judge by the notches in the bridge for the strings, the four upper strings can be bowed only in pairs. Hence the open strings can produce only three tones, as in the instrument previously shown. Sometimes the *kamanca* has only two strings or pairs of strings. In this case the strings are tuned at the interval of a fourth.

The Persian *kamanca*, in earlier manuscripts also called *gizak*, can be traced as far back as the 11th century. How little the form has changed in all this time may be seen in a picture of the period, around the year 1450 A.D.[17]. Here a chained demon plays a four-stringed *kamanca*. The long, slightly bent bow is held with the palm upwards, and the strings are pressed to the wooden stick by touching them with all fingers including the thumb. Body, neck and spike of the instrument are exactly the same as in the modern *kamanca* previously described. In some modern instruments, innovations or changes for the better were made on the peg-box. In this way the peg-box may become similar to that of the European violin or the lute. But the instrument as a whole retains its tradition.

In other countries of the Middle East it is possible to modify some details of the spike fiddle without changing the whole construction. The Egyptian spike fiddle called *rabab al-muganni* (i.e. *rabab* of the singer)[18], for example has a trapezoid body consisting of a wooden frame with parchment in the front and on the back, a square iron foot and a cylindrical wooden stick, in the upper part of which a peg-box is carved out. Two strings of horse-hair pass over a small bridge and are attached by a ring to the foot. This instrument is used for the accompaniment of a singer, as the name *rabab al-muganni* suggests. Two strings are tuned at the interval of a fifth[19]. Another Egyptian instrument has a square body covered with a skin (Fig. 6).

Here two pieces of skin are stretched over a wooden rib in such a manner that they come together in the middle of the rib. There they are sewn together. A wooden stick is passed diagonally through the body. Its lower end projects somewhat beyond the body. The string is slung around the lower end of the stick and then passes through a hole in the tip of the high, triangular bridge. At the upper part, the string is wound around a lateral peg in the tip of the stick. Possibly this is the *rabab as-sa'ir*, the '*rabab* of the poet' used for accompaniment of poetical recitations. A similar instrument is called *masenqo* in Ethiopia, and there it is "typically associated with the *asmari*, or troubadour"[20].

If we look back from this point at all instruments described so far it will be impossible to find the origin of the *rabab* in only one particular form or pattern. It appears more correct to combine the origin of the *rabab* with the invention and the first use of the bow. But since that time, there is no standardised development either. No picture of the bowed long-necked lute described by Al-Farabi has been found up to now, a fact from which we may conclude that this type of *rabab* disappeared from musical practise a little later. But those forms of *rabab* and *kamanca* which were known already in the 10th and 11th century are in use up to now, and from these types other forms of bowed instruments — more or less similar in appearance — have developed. If — in the light of these types — we now try to classify the *rabab* instruments used in South East Asia, we will find them most similar to the Persian *kamanca*, called in Turkey *rebap*. A few examples may follow for demonstration (Fig. 7).

Figure 7 shows a spike fiddle used in Sumatra. Its body is a gourd of which the upper third is cut off. A skin is stretched over the mouth and sewn with strips of bamboo. The foot is carved like a bust of a human being. Two strings are attached to its upper end. They pass over a flat bridge along the fingerboard to lateral pegs in the upper part of the stick.

Another rabab comes from Tidore (Fig. 8).

It has a hemispherical body of wood, and the stick projects only a little beyond its lower side. Three strings are attached to this part of the stick; they pass over a very flat bridge along the round neck to the lateral pegs put into a wooden scroll.

The homeland of a third instrument is Celebes (Fig. 9). This is called *geso-geso* by the Toradja's and *keso-keso* in Southern Celebes, and *geso* or *keso* means 'to stroke'. Its heavy wooden body is formed like a half-pear set on its tip. A skin is stretched over the mouth and glued to the side of the body. Two strings are attached to the spike underneath the body and are wound around two crude pegs in the tip of the stick. Another instrument like the *rabab* is the *sinrili* of Celebes.

All these instruments and many others used mainly in folk music (as the Thai instrument *sa law*), may be understood as derivations of the *kamanca* produced from native material and by native craftsmanship. On the other hand, the *rabab* used in the *Gammelan* orchestra as well as the Cambodian *tro khmer*[21] and the Thai instrument *saw. sa. m sai* can be considered as particular, refined varieties of the spike fiddle.

Here first, the *rabab* used in the Javanese Gammelan.

The rather flat wooden body ornamented by textile on its back looks, when seen from the front, like a triangle with rounded edges set on its sharp angle. This form of the body along with its ornamentation is the most marked deviation from the Persian-Arabian *kamanca.* A skin stretched over the mouth of the body is glued on its side. Neck and spike are shaped on a lathe. Two wire strings are attached to a button at the upper, expanded end of the spike. They pass over a high, deeply indented bridge and along the neck to two lateral pegs. At the end of the pegs there are round, vaulted discs, possibly of horn. The instrument is played with a bow consisting of a long-arched stick and animal hair, possibly of horse tail. A particular playing technique is connected with this variety of spike fiddle: the neck is at such a distance from the strings that the former cannot be used as a finger-board. Thus stopping the strings with exactitude may become more difficult. But on the other hand, the player has greater freedom in variation of the pitches; he is able to produce not only plain tones but also all sound-movements and ornaments between tones or around them by strengthening or slackening of pressure. Something similar applies to the *rabab* in the Balinese *Gammelan Gambuh*[22].

According to Colin McPhee who has described the Balinese *rabab* in his publication *Music in Bali* (p. 117-118), the instrument is played in unison with the *sulings*, the end-blown flutes . He says, "Its body may consist of half a coconut shell, but is more often carved out of wood. It is covered with a parchment of buffalo intestine. The bridge supports two wire strings which are tightened by tuning pegs. The two strings *wadon* and *lanang* are tuned respectively to the second and sixth tones of the *suling*-scale, *ding* and *dung Tembung*, which stand a near tritone apart — 627 cents in Tabanan *suling*, 628 cents in the *suling* of Batuan.

"This *rabab* is played by a loose bow, held between thumb and first two fingers while the fourth and the fifth are passed between the bow and the hair to keep the latter taut. Resin is used on the hair, and bowing is a continuous back and forth movement. A thin, rather acid tone is produced with no expression and no distinguishable difference between the pushed bow and the drawn bow. A slight vibrato is sometimes used, and the melody is occasionally ornamented with light, brief trills. In slow movements long sustained tones are played with full bowing of unequal speed and pressure, giving the effect of an irregularly recurring throb during each tone."

Another instrument related to the *rabab* used in the *Gammelan* orchestra is the Thai instrument *saw. sa. m sai.*[23]. This instrument has been precisely depicted in Dhanit Yupho's publication *Thai Musical Instruments*, translated from Thai into English by David Morton (Bangkok 1960, p. 96-100). Here Dhanit Yupho assumes the *saw. sa. m sai.* to be similar to the Chinese *san hsien* and the Japanese *shamisen*. But both these instruments appear like lutes with a long neck. Of the two, the Chinese *san hsien*[24] has a square sound-box with rounded corners, which is covered with snake skin. The flat neck is used as a finger board; it continues into an open peg-box; the Japanese *shamisen* is similar in construction, but it differs in some details[25]. Its sound box is not covered with snake skin but with thin animal hide. Moreover it is plucked with a big plectrum, whereas the *san hsien* is plucked with fingers.

If we assume — like Dhanit Yupho — a connection between these instruments and the *saw. sa. m sai.*, we also have to draw a parallel to the Japanese *kokyu*[26], which has three or four strings, but is played with a bow. Besides being bowed, the *kokyu* has a short spike underneath the body and a bridge similar to that of the Balinese *rabab*. Regarding this we may conclude that some details derive from the Far East, but the Balinese and the Javanese *rabab* as well as the Thai instrument *saw. sa. m sai.* are on the whole — as Dhanit Yupho himself has stated — descendants of the Persian-Arabian *kamanca-rabab*.

"The body of the *saw. sa. m sai.*", Dhanit Yupho states, "is made from half a coconut shell. The half which is used must have three bulges in the formation of the points of a triangle. This forms the back part of the resonance chamber. The open part of the shell is covered with goat— or calf-skin .. Three gut strings are fastened inside the shaft at the lower end and, after passing over the sound-box, pass through the hole at the upper end and are fastened inside the neck shaft to the three tuning pegs. These tuning pegs, two of which are to the player's left — one to the right, are rather long . ." An important part of the instrument is the head weight, " .. which is fastened to the skin of the head to the left of the bridge .. It has to be proportionate in weight to the size and thickness of the head. It gives the sound produced when the instrument is played a more sonorous and mellifluous quality .. " Only by this head weight and by its spike not shaped on a lathe, the *saw. sa. m sai.* differs from the *rabab* used in the *Gammelan* orchestra, but these differences are negligible if we take into consideration the possible prototype of both, the Persian-Arabian *kamanca*. But compared with the *kamanca*, the peculiarities do not count very much either, if we suppose that the fiddles used in Europe in the Middle Ages and in European folk music in many places are still derived from the *rabab* with bellied or boat-like body, and that this type of bowed instrument has been developed into the present European violin, according to several scholars.

Thus we may trace two big currents both originating in the Middle East after the invention of the bow in the 9th century or a little earlier: the one brought the bulging-bodied instrument into the West, the other led the spike fiddle into the East. But if we go back to the word, we cannot insist upon the form, because the word indicates only "bowed instrument", not a specific form. In this sense we are able to include the long-necked lute, also called *rabab* and described by Al-Farabi, although with regard to its form it is surely not the prototype of the two other types of bowed instruments.

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7. Reproduced in W. Bachmann, op. cit. fig. 9.
8. Regarding this and the following compare W. Bachmann, op. cit. p. 70—76.
9. Reproduced in W. Bachmann, op. cit. fig. 18.
10. Reproduced in W. Bachmann, op. cit. fig. 17.
11. Examples from the Augustinian monastery Marbach/Alsace in France and the Abbey Marturi near Florence, Upper Italy, see W. Bachmann, op. cit. fig. 36 and 37.

12. A figure is given in the accompanying text of the record "Turkey II' from the series "A Musical Anthology of the Orient", UNESCO-Collection, Barenreiter-Musicaphon BM 30 L 2022.

13. Reproduced in H. G. Farmer, "Islam", of the series "Musikgeschichte in Bildern, ed. by Heinrich Besseler and Max Schneider, vol. III, part 2, Leipzig 1966, p. 59, fig. 44, compare p. 58.

14. Reproduced in H. G. Farmer, "Islam", p. 109, fig. 102, compare p. 108.

15. Reproduced in the article "Rebab" by H. G. Farmer, MGG vol. 11, col. 79, fig. 1.

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21. See A. Danielou, La musique du Cambodge et du Laos, Publications de l'Institut Francais d'Indologie No. 9, Pondichery 1957, p. 19—20, and plates 13 and 16.

22. Reproduced in Colin McPhee, Music of Bali, New Haven and London 1966, plate 30.

23. Besides the publication of Dhanit Yupho, quoted in the text, see D. Morton, The traditional music of Thailand, accompanying text, to the record IER 7502, Institute of Ethnomusicology, University of California, Los Angeles.

24. See for example K. Reinhard, Chinesische Musik, Eisenach und Kassel 1956, opposite to p. 152.

25. Reproduced in W. P. Malm, Japanese music and musical instruments, 3rd printing, Rutland and Tokyo 1969, p. 197, plates 72 and 73.

26. See W. P. Malm, op. cit. p. 175, plate 55.

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